

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An exhaust gas treatment apparatus placed in an exhaust system of a ~~combustion gas and used combustion gas~~, for collecting and removing particulate matter contained in an exhaust gas, the treatment apparatus ~~characterized by~~ comprising:

a casing connected to the exhaust system to serve as a main flow path of the exhaust gas;

_____ a honeycomb filter placed in the inside of the casing in such a manner ~~that interrupts that it interrupts~~ the main flow path, the honeycomb filter having a plurality of cells partitioned by partition walls to serve as filter flow paths of the exhaust gas and collecting the particulate matter contained in the exhaust gas; and

_____ plasma generation electrodes composed of a ~~pulse electrode~~ first electrode and an earth ~~electrode placed being faced each other by sandwiching the honeycomb filter there,~~ electrode, the plasma generation electrodes being capable of generating nonthermal plasma between the ~~pulse electrode~~ first electrode and the earth electrode,

wherein

_____ the particulate matter contained in the exhaust gas flowing into the casing is collected by the honeycomb filter,

_____ nitrogen monoxide contained in the exhaust gas is oxidized to nitrogen dioxide by the nonthermal plasma generated between the ~~pulse electrode~~ first electrode and the earth electrode constituting the plasma generation ~~electrodes, electrodes, and~~

_____ combustible materials in the particulate matter collected and deposited on the surface of the partition walls are removed through oxidation by the nitrogen dioxide produced

~~and, thereby~~ and thereby the honeycomb filter ~~can be regenerated~~ is regenerated,

wherein the cells of the honeycomb filter are plugged alternatively at a gas inlet end and a gas outlet end of the honeycomb filter, so that the exhaust gas passes through the partition walls, and

said first electrode and said earth electrode have one of the following arrangements:

- (i) the electrodes are on opposite side faces of the honeycomb filter which has a rectangular cross section, the side faces extending parallel to the cells,
- (ii) the earth electrode is on the outer peripheral surface of the honeycomb filter, and surrounds the honeycomb filter, extending parallel to the cells, and the first electrode is a rod-shaped electrode inserted in a cell of the honeycomb filter and extending from the gas inlet end to the vicinity of the gas outlet end,
- (iii) the earth electrode is on the outer peripheral surface of the honeycomb filter, and surrounds the honeycomb filter, extending parallel to the cells, and the first electrode is formed as a plurality of needles on a net-shaped insulating plate arranged in front of the gas inlet end of the honeycomb filter.

2. (Currently Amended) An exhaust gas treatment apparatus placed in an exhaust system of a ~~combustion gas and used combustion gas~~ combustion gas, for collecting and removing particulate matter contained in an exhaust gas, the treatment apparatus ~~characterized by~~ comprising:

a casing connected to the exhaust system to serve as a main flow path of the exhaust gas;

_____ a honeycomb filter placed in the inside of the casing in such a manner ~~that interrupts that it interrupts~~ the main flow path, the honeycomb filter being made of a non-conductive material and having a plurality of cells partitioned by partition walls to serve as filter flow paths of the exhaust gas and collecting the particulate matter contained in the exhaust gas; and

_____ plasma generation electrodes composed of a ~~pulse electrode~~ first electrode and an earth electrode ~~placed in such a manner that at least one of them is in contact with the honeycomb filter, electrode,~~ the plasma generation electrodes being capable of generating nonthermal plasma between the ~~pulse electrode~~ first electrode and the earth electrode,

wherein

_____ the particulate matter contained in the exhaust gas flowing into the casing is collected by the honeycomb filter,

_____ nitrogen monoxide contained in the exhaust gas is oxidized to nitrogen dioxide by the nonthermal plasma generated between the ~~pulse electrode~~ first electrode and the earth electrode constituting the plasma generation ~~electrodes, electrodes, and~~

_____ combustible materials in the particulate matter collected and deposited on the surface of the partition walls are removed through oxidation by the nitrogen dioxide produced ~~and, thereby, and thereby~~ the honeycomb filter ~~can be regenerated, is regenerated,~~

_____ wherein the cells of the honeycomb filter are plugged alternatively at a gas inlet end and a gas outlet end of the honeycomb filter, so that the exhaust gas passes through the partition walls, and

_____ one of the first electrode and the earth electrode is placed at one of the gas inlet end and the gas outlet end, and the other of the first electrode and the earth electrode is placed at the other of the gas inlet end and the gas outlet end.

3. (Currently Amended) The exhaust gas treatment apparatus according to

Claim 1, further comprising a power source to apply a voltage to the ~~pulse-electrode~~first electrode.

4-11. (Canceled)

12. (Currently Amended) The exhaust gas treatment apparatus according to Claim 2, further comprising a power source to apply a voltage to the ~~pulse-electrode~~first electrode.

13. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, wherein the plasma generation electrodes are placed on outer perimeter surfaces of the honeycomb filter by a printing method through the use of a metal paste.

14. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, wherein the plasma generation electrodes are placed on outer perimeter surfaces of the honeycomb filter by a printing method through the use of a metal paste.

15. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, wherein the material for the honeycomb filter comprises at least one material selected from the group consisting of cordierite, silicon carbide, SIALON, and silicon nitride.

16. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, wherein the material for the honeycomb filter comprises at least one material selected from the group consisting of cordierite, silicon carbide, SIALON, and silicon nitride.

17. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, wherein the cell density of the honeycomb filter is 15 to 60 cells/cm², the thickness of the partition wall is 0.2 to 0.5 mm, and the depth of plugging of the cell at end surfaces of the honeycomb filter is 1 to 20 mm.

18. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, wherein the cell density of the honeycomb filter is 15 to 60 cells/cm², the thickness of the partition wall is 0.2 to 0.5 mm, and the depth of plugging of the cell at end surfaces of the honeycomb filter is 1 to 20 mm.

19. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, further comprising a dehydration device on the upstream side of the exhaust system of the casing in order to remove water contained in at least a part of the exhaust gas flowing into the casing.

20. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, further comprising a dehydration device on the upstream side of the exhaust system of the casing in order to remove water contained in at least a part of the exhaust gas flowing into the casing.

21. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, wherein a catalyst is held on the surface and/or in the inside of the partition walls of the honeycomb filter.

22. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, wherein a catalyst is held on the surface and/or in the inside of the partition walls of the honeycomb filter.

23. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, further comprising a NO_x treatment device on the downstream side of the exhaust system of the casing.

24. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, further comprising a NO_x treatment device on the downstream side of the exhaust system of the casing.

25. (Previously Presented) The exhaust gas treatment apparatus according to Claim 3, wherein a current supplied from the power source is a direct current with a voltage of at least 1 kV, a pulsed current with a peak voltage of at least 1 kV and the number of pulses of at least 1 per second, an alternating current with a peak voltage of at least 1 kV and a frequency of at least 1, or a current produced by superimposition of any two of them.

26. (Previously Presented) The exhaust gas treatment apparatus according to Claim 12, wherein a current supplied from the power source is a direct current with a voltage of at least 1 kV, a pulsed current with a peak voltage of at least 1 kV and the number of pulses of at least 1 per second, an alternating current with a peak voltage of at least 1 kV and a frequency of at least 1, or a current produced by superimposition of any two of them.

27. (Previously Presented) The exhaust gas treatment apparatus according to Claim 1, placed in an exhaust system of a combustion gas of a diesel engine.

28. (Previously Presented) The exhaust gas treatment apparatus according to Claim 2, placed in an exhaust system of a combustion gas of a diesel engine.